

What is claimed is:

1. A method for determining a quality of an optical link, comprising:
identifying a known signal;
5 transmitting and receiving the signal over an optical link;
comparing the received signal to the known signal using optical correlation; and
determining a quality of the optical link based on the comparison.

2. The method of claim 1, wherein comparing includes correlating the received
10 signal $r(t)$ with the known signal $s(t)$, where t represents time, using the function

$$c(t) = \int_{-\infty}^{\infty} s(t)r(t-\tau)dt .$$

3. The method of claim 1, wherein comparing includes optical correlation
implemented in a discrete system by sampling the received signal N times, according to
15 the function $c(t) = \sum_{k=0}^{N-1} s_k r(t - k\tau_k)$.